# METHOD FOR AUTOMATICALLY ADJUSTING HELP INFORMATION DISPLAYED IN AN ONLINE INTERACTIVE SYSTEM

## BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention generally relates to interactive data processing systems, and more particularly to a technique which provides a help/dialog function that presents information to a user based on the user's experience level with the interactive system. This approach allows a user to easily learn an application and avoid the burdensome overhead of too much help/dialog information after a degree of familiarity is achieved.

2. Description of the Prior Art

The change from centralized, batch operation of computer systems to distributed, interactive usage means more users are directly involved in using these systems. Moreover, computers are becoming more heterogeneous as the usage of computers spreads. The level of experience with or knowledge of computers by the users varies widely. More and more, the use of a computer or data processing system is by nonprofessionals in the data processing arts, and it is therefore important that the system be made "user-friendly" to facilitate ease of learning, as well as proper data entry and processing. However, as users repeatedly use a computer program, hereinafter referred to as an application, and reach a greater level of skill or proficiency with it, they require less and less help/dialog information. As used herein, the skill level of the user refers to a particular user's familiarity with a specific application or system as opposed to the user's skill in the field that the system addresses, such as banking, accounting or the like.

"User-friendly" systems have typically adopted a display screen "panel" or help/dialog approach which gives the user a choice of several options to perform and/or blanks to fill in. The blanks correspond to data fields, and these data fields have constraints on the type of characters that will be accepted, the length of the field, the compatibility of one entry with another, and so forth. A good prior art approach to the problem of prompts for data entry is found in U.S. Pat. No. 4,500,964, to Nickle, issued Feb. 19, 1985. The Nickle system provides operator information on errors made in entering information interactively. However, it is also necessary to provide the user with help/dialogs that clarify what each data entry screen requires. As the skill level of the user increases, the help/dialog information may become clumsy and burdensome and it would be beneficial to be able to limit it. However, if a person does not use an application for a period of time, the full help/dialog information may become important again.

Prior art techniques which are concerned with guiding a user through the proper entry of information into a system include the system described in U.S. Pat. No. 4,479,197, to Haag et al., issued Oct. 23, 1984. The Haag et al. patent discloses a system which allows the operator to select the modes of operation. At the highest level of control, the user can select which panel is of interest. The selected panel displays mode selection fields from which a selection can be made. The selected modes are linked in a cyclic order so that repeated activation of the field select key will cause the modes to be cycled through their linked sequence. The Haag et al. patent is specifically directed to logic state analyzers.

Another example is described in U.S. Pat. No. 4,308,582, to Berger, issued Dec. 29, 1981. The Berger patent discloses a precursory set-up for a word processor in which the user is presented with a list of acceptable functions that the word processor can perform. After the user selects a desired function, the control system automatically builds a list of control parameters for executing the selected functions and presents these control parameters to the user.

Users' needs change over time as they gain experience in the use of an application program. "Helpful" information may be helpful to the novice but may frustrate and slow the more experienced user. What is needed is a system supplement to the traditional help facility where the user receives helpful information by requesting it and yet does not detract from the expedient use of the application as the user gains experience in its use.

## SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide a technique to help a user of an interactive computer or data processing system with help/dialog information based on the skill level or familiarity of the individual with a particular application.

It is another object of the invention to provide a technique for tracking user learning in each functional area of an application and decrease the amount of help/dialog information presented to the user as learning progresses.

It is another object of the invention to provide a technique for tracking the last date of usage of a functional area of an application and returning the user to the most basic help/dialog information upon determining a lack of usage of the application for an extended period of time.

The foregoing objects of the invention are accomplished by providing a supplement to the conventional help/dialog facility, comprising a complementary function that limits the amount of information presented based on the skill level of the individual as tracked by the number of times the user has been through the help/dialog for a particular functional area. As the user exceeds a user defined threshold for any functional area, the help/dialog information presented is reduced and the number of times through the help/dialog is reset. Additionally, an elapsed day count is kept to track the number of days between usages of a functional area. If a user defined threshold is exceeded, the help/dialog information is returned to complete help/dialog information.

The user is always in control of the amount of help he or she receives. For example, whenever user-set thresholds are exceeded, the user is notified and has the option of continuing with the previous level of help/dialog information. Addtionally, the user has the option at any time to change the level of help/dialog information or the user-set thresholds. If the user reduces the amount of help presented or the system has automatically reduced the amount of help due to exceeding a user-set threshold, the user is still able to access more help through the help facility.

## BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other objects, aspects and advantages of the invention will be better understood from